Fishery Bulletin Index

Volume 102(1–4), 2004

List ot titles

102 (1)

1 The effects of size-selective fisheries on the stock dynamics of and sperm limitation in sex-changing fish, by Suzanne H. Alonzo and Marc Mangel

14 An environmentally based growth model that uses finite difference calculus with maximum likelihood method: its application to the brackish water bivalve *Corbicula japonica* in Lake Abashiri, Japan, by Katsuhisa Baba, Toshifumi Kawajiri, Yasuhuro Kuwahara, and Shigeru Nakao

25 Juvenile salmonid distribution, growth, condition, origin, and environmental and species associations in the Northern California Current, by Rick D. Brodeur, Joseph P. Fisher, David J. Teel, Robert L. Emmett, Edmundo Casillas, and Todd W. Miller

47 Spatial and temporal variation in the diet of the California sea lion (*Zalophus californianus*) in the Gulf of California, Mexico, by Francisco J. García-Rodríguez and David Auarioles-Gamboa.

63 Recruitment and spawning-stock biomass distribution of bay anchovy (*Anchoa mitchilli*) in Chesapeake Bay, by Sukgeun Jung and Edward D. Houde

78 Coupling ecology and economy: modeling optimal release scenarios for summer flounder (*Paralichthys dentatus*) stock enhancement, by Todd G. Kellison and David B. Eggleston

94 Sex-specific growth and mortality, spawning season, and female maturation of the stripey bass (*Lutjanus carponotatus*) on the Great Barrrier Reef, by Jacob T. Krtizer

108 Examination of the foraging habits of Pacific harbor seal (*Phoca vitulina richardsi*) to describe their use of the Umpqua River, Oregon, and their predation on salmonids, by Anthony J. Orr, Adria S. Banks, Steve Mellman, Harriet R. Huber, Robert L. DeLong, and Robin F. Brown

118 Larval development of the sidestriped shrimp (*Pandalopsis dispar* Rathbun) (Crustacea, Decapoda, Pandalidae) reared in the laboratory, by Wongyu Park, R. Ian Perry, and Sung Yun Hong

127 Sources of age determination errors for sablefish (*Anoplopoma fimbria*) by Donald E. Pearson and Franklin R. Shaw

142 Growth, mortality, and hatchdate distributions of larval and juvenile spotted seatrout (*Cynoscion nebulosus*) in Florida Bay, Everglades National Park, by Allyn B. Powell, Robin T. Chesire, Elisabeth H. Laban, James Colvocoresses, Patrick O'Donnell, and Marie Davidian

156 Age determination and growth of the night shark (*Carcharhinus signatus*) off the northeastern Brazilian coast, by Francisco M. Santana and Rosangela Lessa

168 Distribution and biology of prowfish (*Zaprora silenus*) in the northeast Pacific, by Keith R. Smith, David A. Somerton, Mei-Sun Yang, and Daniel G. Nichol

179 Fish lost at sea: the effect of soak time on pelagic longline catches, by Peter Ward, Ransom A. Myers, and Wade Blanchard

196 Effects of density-dependence and sea surface temperature on interannual variation in length-at-age of chub mackerel (*Scomber japonicus*) in the Kuroshio-Oyashio area during 1970–1997, by Chikako Watanabe and Akihiko Yatsu

207 Latitudinal and seasonal egg-size variation of the anchoveta (*Engraulis ringens*) off the Chilean coast, by Llanos-Rivera, Alejandra, and Leonard R. Castro

213 Molecular methods for the genetic identification of salmonid prey from Pacific harbor seal (*Phoca vitulina richardsi*) scat, by Maureen Purcell, Greg Mackey, Eric LaHood, Harriet Huber, and Linda Park

221 Diel vertical migration of the bigeye thresher shark (*Alopias superciliosus*), a species possessing orbital retia mirabilia, by Kevin C. Weng and Barbara A. Block

102(2)

233 Annual estimates of the unobserved incidental kill of pantropical spotted dolphin (*Stenella attenuata attenuata*) calves in the tuna purse-seine fishery of the eastern tropical Pacific, by Frederick Archer, Tim Gerrodette, Susan Chivers, and Alan Jackson

245 A remarkable new species of Psednos (Teleostei: Liparidae) from the western North Atlantic Ocean, by Natalia V. Chernova and David L. Stein

251 Age and growth of sailfish (*Istiophorus platypterus*) in waters off eastern Taiwan, by Wei-Chuan Chiang, Chi-Lu Sun, Su-Zan Yeh, and Wei-Cheng Su

264 A habitat-use model to determine essential fish habitat for juvenile brown shrimp (*Farfantepenaeus aztecus*) in Galveston Bay, Texas, by Randall D. Clark, John D. Christensen, Mark E. Monaco, Philip A. Caldwell, Geoffrey A. Matthews, and Thomas J. Minello

278 Translocation as a strategy to rehabilitate the queen conch (*Strombus gigas*) population in the Florida Keys, by Gabriel A. Delgado, Claudine T. Bartels, Robert A. Glazer, Nancy J. Brown-Peterson, and Kevin J. McCarthy

289 Genetic differentiation among Atlantic cod (*Gadus morhua*) from Browns Bank, Georges Bank, and Nantucket Shoals, by Christopher Lage, Kristen Kuhn, and Irv Kornfield

298 Conserving oyster reef habitat by switching from dredging and tonging to diver harvesting, by Hunter S. Lenihan and Charles H. Peterson

306 Fecundity, egg deposition, and mortality of market squid (*Lolilgo opalescens*), by Beverly J. Macewicz, John R. Hunter, Nancy C. H. Lo, and Erin L. LaCasella

328 The dusky rockfishes (Teleostei: Scorpaeniformes) of the North Pacific Ocean: resurrection of *Sebastes variabilis* (Pallas, 1814) and a redescription of *Sebastes ciliatus* (Tilesius, 1813), by James Wilder Orr and James E. Blackburn

349 Recruitment as a evolving random process of aggregation and mortality, by Joseph E. Powers

366 Diet shifts of juvenile red snapper (*Lutjanus campechanus*) with changes in habitat and fish size, by Stephen T. Szedlmayer and Jason D. Lee

376 Individual growth rates and movement of juvenile white shrimp (*Litopenaeus setiferus*) in a tidal marsh nursery, by Stacey Webb and Ronald T. Kneib

389 Does the California market squid (*Loligo opalescens*) spawn naturally during the day or at night? A note on the successful use of ROVs to obtain basic fisheries biology data, by John Forsythe, Nuutti Kangas, and Roger T. Hanlon

393 Incidental capture of loggerhead (*Caretta caretta*) and leatherback (*Dermochelys coriacea*) sea turtles by the pelagic longline fishery off southern Brazil, by Jorge E. Kotas, Silvio dos Santos, Venâncio G. de Azevedo, Berenice M. G. Gallo, and Paulo C. R. Barata

400 Diet changes of Pacific cod (*Gadus macrocephalus*) in Pavlof Bay associated with climate changes in the Gulf of Alaska between 1980 and 1995, by Mei-Sun Yang

102(3)

407 Testicular development in migrant and spawning bluefin tuna (*Thunnus thynnus* (L.)) from the eastern Atlantic and Mediterranean, by Francisco J. Abascal, César Megina, and Antonio Medina

418 Maturity, ovarian cycle, fecundity, and age-specific parturition of black rockfish (*Sebastes melanops*), by Stephen J. Bobko and Steven A. Berkeley

430 Maori octopus (*Octopus maorum*) bycatch and southern rock lobster (*Jasus edwardsii*) mortality in the South Australian lobster fishery, by Daniel J. Brock and Timothy M. Ward

441 Small-boat surveys for coastal dolphins: line-transect surveys of Hector's dolphins (*Cephalorhynchus hectori*), by Stephen Dawson, Elisabeth Slooten, Sam DuFresne, Paul Wade, and Deanna Clement

452 Description and growth of larval and pelagic juvenile pygmy rockfish (*Sebastes wilsoni*) (family Sebastidae), by Thomas E. Laidig, Keith M. Sakuma, and Jason A. Stannard

464 Estimating the emigration rate of fish stocks from marine sanctuaries using tag-recovery data, by Richard McGarvey

473 Reproductive dynamics of female spotted seatrout (*Cynoscion nebulosus*) in South Carolina, by William A. Roumillat and Myra C. Brouwer

488 Estimating Dungeness crab (*Cancer magister*) abundance: crab pots and dive transects compared, by S. James Taggart, Charles E. O'Clair, Thomas C. Shirley, and Jennifer Mondragon

498 A method to improve size estimates of walleye pollock (*Theragra chalcogramma*) and Atka mackerel (*Pleurogrammus monopterygius*) consumed by pinnipeds: digestion correction factors applied to bones and otoliths recovered in scats, by Dominic J. Tollit, Susan G. Heaslip, Tonya K. Zeppelin, Ruth Joy, Katherine A. Call, and Andrew W. Trites

509 Sizes of walleye pollock (*Theragra chalcogramma*) and Atka mackerel (*Pleurogrammus monopterygius*) consumed by the western stock of Steller sea lions (*Eumetopias jubatus*) in Alaska from 1999 to 2000, by Tonya K. Zeppelin, Dominic J. Tollit, Katherine A Call, Trevor J. Orchard, and Carolyn J. Gudmundson

522 Sizes of walleye pollock (*Theragra chalcogramma*) consumed by the eastern stock of Steller sea lions (*Eumetopias jubatus*) in Southeast Alaska from 1994 to 1999, by Dominic J. Tollit, Susan G. Heaslip, and Andrew Trites

533 Multidirectional movements of sportfish species between an estuarine no-take zone and surrounding waters of the Indian River Lagoon, Florida, by Derek M. Tremain, Christopher W. Harnden, and Douglas H. Adams

545 Distribution, age, and growth of young-of-the year greater amberjack (*Seriola dumerili*) associated with pelagic *Sargassum*, by R. J. David Wells and Jay R. Rooker

555 Identification of formalin-preserved eggs of red sea bream (*Pagrus major*) (Pisces: Sparidae) using monoclonal antibodies, by Shingo Hiroishi, Yasutaka Yuki, Eriko Yuruzume, Yosuke Onishi, Tomoji Ikeda, Hironobu Komaki, and Muneo Okiyama

102(4)

563 Distribution and abundance of humpback whales (*Megaptera novaeangliae*) and other marine mammals off the northern Washington coast, by John Calambokidis, Gretchen H. Steiger, David K. Ellifrit, Barry L. Troutman, and C. Edward Bowlby

581 Reproductive biology of male franciscanas (*Pontoporia blainvillei*) (Mammalia: Cetacea) from Rio Grande do Sul, southern Brazil, by Daniel Danilewicz, Juan A. Claver, Alejo L. Pérez Carrera, Eduardo R. Secchi, and Nelson F. Fontoura

593 Red snapper (*Lutjanus campechanus*) demographic structure in the northern Gulf of Mexico based on spatial patterns in growth rates and morphometrics, by Andrew J. Fischer, M. Scott Baker Jr., and Charles A. Wilson

604 Elemental signatures in otoliths of larval walleye pollock (*Theragra chalcogramma*) from the northeast Pacific Ocean, by Jennifer L. FitzGerald, Simon R. Thorrold, Kevin M. Bailey, Annette L. Brown, and Kenneth P. Severin

617 A sudden collapse in distribution of Pacific sardine (*Sardinops sagax*) off southwestern Australia enables an objective re-assessment of biomass estimates, by Daniel J. Gaughan, Timothy I. Leary, Ronald W. Mitchell, and Ian W. Wright

634 Fish recolonization in temperate Australian rockpools: a quantitative experimental approach, by Shane P. Griffiths, Ron J. West, Andy R. Davis, and Ken G. Russell

648 Factors influencing the timing and frequency of spawning and fecundity of the goldlined seabream (*Rhabdosargus sarba*) (Sparidae) in the lower reaches of an estuary, by S. Alexander Hesp, Ian C. Potter, and Sonja R. M. Schubert

661 Fishery dynamics of the California market squid (*Loligo opalescens*), as measured by satellite remote sensing, by Michael R. Maxwell, Annette Henry, Christopher D. Elvidge, Jeffrey Safran, Vinita R. Hobson, Ingrid Nelson, Benjamin T. Tuttle, John B. Dietz, and John R. Hunter

671 Magnitude and distribution of sea turtle bycatch in the sea scallop (*Placopecten magellanicus*) dredge fishery in two areas of the northwestern Atlantic Ocean, 2001–2002, by Kimberly T. Murray

682 Validation and interpretation of annual skeletal marks in loggerhead (*Caretta caretta*) and Kemp's ridley (*Lepidochelys kempii*) sea turtles, by Melissa L. Snover and Aleta A. Hohn.

693 The Hudson-Raritan Estuary as a crossroads for distribution of blue (*Callinectes sapidus*), lady (*Ovalipes ocellatus*), and Atlantic rock (*Cancer irroratus*) crabs, by Linda L. Stehlik, Robert A. Pikanowski, and Donald G. McMillan

711 Radiometric validation of age, growth, and longevity for the blackgill rockfish (*Sebastes melanostomus*), by Melissa M. Stevens, Allen H. Andrews, Gregor M. Cailliet, Kenneth H. Coale, and Craig C. Lundstrom

723 Descriptions of larval, prejuvenile, and juvenile finescale menhaden (*Brevoortia gunteri*) (family Clupeidae), and comparisons to gulf menhaden (*B. patronus*), by James M. Tolan and David A. Newstead

740 Capture probability of a survey trawl for red king crab (*Paralithodes camtschaticus*), by Kenneth L. Weinberg, Robert S. Otto, and David A. Somerton

733 Diet of the minimal armhook squid (*Berryteuthis anonychus*) (Cephalopoda: Gonatidae) in the northeast Pacific during spring, by Kazuhisa Uchikawa, John R. Bower, Yasuko Sato, and Yasunori Sakurai

750 Evidence of shark predation and scavenging of fishes equipped with pop-up satellite archival tags, by David W. Kerstetter, Jeffery J. Polovina, and John E. Graves

757 Survival rates of rays discarded by the bottom trawl squid fishery off the Falkland slands, by Vladimir V. Laptikhovsky

Fishery Bulletin Index

Volume 102(1–4), 2004

List ot authors

Abascal, Francisco J. 407
Adams, Douglas H. 533
Alonzo, Suzanne H. 1
Andrews, Allen H. 711
Archer, Frederick 233
Auarioles-Gamboa, David 47
Azevedo, Venâncio G. de 393

Baba, Katsuhisa 14
Bailey, Kevin M. 604
Baker Jr., M. Scott 593
Banks, Adria S. 108
Barata, Paulo C. R. 393
Bartels, Claudine T. 278
Berkeley, Steven A. 418
Blackburn, James E. 328
Blanchard, Wade 179
Block, Barbara A. 221
Bobko, Stephen J. 418
Bower, John R. 733
Bowlby, C. Edward 563
Brock, Daniel J. 430
Brodeur, Rick D. 25
Brouwer, Myra C. 473
Brown, Annette L. 604
Brown, Robin F. 108
Brown-Peterson, Nancy J. 278

Cailliet, Gregor M. 711
Caldwell, Philip A. 264
Call, Katherine A. 498, 509
Calambokidis, John 563
Casillas, Edmundo 25
Castro, Leonard R. 207
Chernova, Natalia V. 245
Cheshire, Robin T. 142
Chiang, Wei-Chuan 251
Chivers, Susan 233
Christensen, John D. 264
Clark, Randall D. 264
Claver, Juan A. 581
Clement, Deanna 441
Coale, Kenneth H. 711
Colvocoresses, James 142

Danilewicz, Daniel 581
Davidian, Marie 142
Davis, Andy R. 634
Dawson, Stephen 441
Delgado, Gabriel A. 278
DeLong, Robert L. 108
Dietz, John B. 661
DuFresne, Sam 441

Eggleston, David B. 78
Ellifrit, David K. 563
Elvidge, Christopher D. 661
Emmett, Robert L. 25

Fischer, Andrew J. 593
Fisher, Joseph P. 25
FitzGerald, Jennifer L. 604
Fontoura, Nelson F. 581
Forsythe, John 389

Gallo, Berenice M. G. 393
García-Rodríguez, Francisco J. 47
Gaughan, Daniel J. 617
Gerrodette, Tim 233
Glazer, Robert A. 278
Graves, John E. 750
Griffiths, Shane P. 634
Gudmundson, Carolyn J. 509

Hanlon, Roger T. 389
Harnden, Christopher W. 533
Heaslip, Susan G. 498, 522
Henry, Annette 661
Hesp, S. Alexander 648
Hiroishi, Shingo 555
Hobson, Vinita R. 661
Hohn, Aleta A. 682
Hong, Sung Yun 118
Houde, Edward D. 63
Huber, Harriet R. 108, 213
Hunter, John R. 306, 661

Ikeda, Tomoji 555

Jackson, Alan 233
Joy, Ruth 498
Jung, Sukgeun 63

Kangas, Nuutti 389
Kawajiri, Toshifumi 14
Kellison, Todd G. 78
Kerstetter, David W. 750
Kneib, Ronald T. 376
Komaki, Hironobu 555
Kornfield, Irv 289
Kotas, Jorge E. 393
Kritzer, Jacob P. 94
Kuhn, Kristen 289
Kuwahara, Yasuhiro 14

Laban, Elisabeth H. 142
LaCasella, Erin L. 306
Lage, Christopher 289
LaHood, Eric 213
Laidig, Thomas E. 452
Laptikhovsky, Vladimir V. 757
Leary, Timothy I. 617
Lee, Jason D. 366
Lenihan, Hunter S. 298
Lessa, Rosangela 156
Llanos-Rivera, Alejandra 207
Lo, Nancy C. H. 306
Lundstrom, Craig C. 711

Macewicz, Beverly J. 306
Mackey, Greg 213
Mangel, Marc 1
Matthews, Geoffrey A. 264
Maxwell, Michael R. 661
McCarthy, Kevin J. 278
McGarvey, Richard 464
McMillan, Donald G. 693
Medina, Antonio 407
Megina, César 407
Mellman, Steve 108
Miller, Todd W. 25
Minello, Thomas J. 264
Mitchell, Ronald W. 617
Monaco, Mark E. 264
Mondragon, Jennifer 488
Murray, Kimberly T. 671
Myers, Ransom A. 179

Nakao, Shigeru 14
Nelson, Ingrid 661
Newstead, David A. 723
Nichol, Daniel G. 168

O'Clair, Charles E. 488
O'Donnell, Patrick 142
Okiyama, Muneo 555
Onishi, Yosuke 555
Orchard, Trevor J. 509
Orr, Anthony J. 108
Orr, James W. 328
Otto, Robert S. 740

Park, Linda 213
Park, Wongyu R. 118
Pearson, Donald E. 127
Pérez Carrera, Alejo L. 581
Perry, R. Ian 118
Peterson, Charles H. 298
Pikanowski, Robert A. 693
Polovina, Jeffery J. 750

Potter, Ian C. 648
Powell, Allyn B. 142
Powers, Joseph E. 349
Purcell, Maureen 213

Rooker, Jay R. 545
Roumillat, William A. 473
Russell, Ken G. 634

Safran, Jeffrey 661
Sakuma, Keith M. 452
Sakurai, Yasunori 733
Santana, Francisco M. 156
Santos, Silvio dos 393
Sato, Yasuko 733
Secchi, Eduardo R. 581
Severin, Kenneth P. 604
Shaw, Franklin R. 127
Shirley, Thomas C. 488
Schubert, Sonja R. M. 648
Slooten, Elisabeth 441
Smith, Keith R. 168
Snover, Melissa L. 682
Somerton, David A. 168, 740
Stannard, Jason A. 452
Stehlik, Linda L. 693
Steiger, Gretchen H. 563
Stein, David L. 245
Stevens, Melissa M. 711
Su, Wei-Cheng 251
Sun, Chi-Lu 251
Szedlmayer, Stephen T. 366

Taggart, S. James 488
Teel, David J. 25
Tolan, James M. 723
Tollit, Dominic J. 498, 509, 522
Thorrold, Simon R. 604
Tremain, Derek M. 533
Trites, Andrew W. 498, 522
Troutman, Barry L. 563
Tuttle, Benjamin T. 661
Uchikawa, Kazuhisa 733

Wade, Paul 441
Ward, Peter 179
Ward, Timothy M. 430
Watanabe, Chikako 196
Webb, Stacey 376
Wells, R. J. David 545
Weng, Kevin C. 221
Weinberg, Kenneth L. 740
West, Ron J. 634
Wilson, Charles A. 593
Wright, Ian W. 617

Yang, Mei-Sun 168, 400
Yatsu, Akihiko 196
Yeh, Su-Zan 251
Yuki, Yasutaka 555
Yuruzume, Eriko 555

Zeppelin, Tonya K. 498, 509

Fishery Bulletin Index

Volume 102(1–4), 2004

List ot subjects

Abundance
  Crab, Dungeness 488
  dolphin, Hector's 441
  estimates (pelagic longline) 179
  harbor seal, Pacific 108
  whales 563
Age
  and growth
    amberjack, greater 533
    rockfish, blackgill 711
    sailfish 251
    shark, night 156
  determination
    problems with 127
    sablefish 127
  validation 711
Aggregation 349
Alabama 366
Alaska 488, 498, 509, 522
Aleutian Islands 168
Alopias superciliosus – *see* shark, bigeye thresher
Alternative fishing practices 298
Amberjack, greater 545
Anchoa mitchilli – *see* anchovy, bay
Anchoveta 207
Anchovy, bay 63
Anoplopoma fimbria – *see* sablefish
Antibodies, monoclonal 555
Assemblages 634
Atlantic 245, 407, 671
Australia 430, 464, 634, 581, 617, 634

Bass, stripey 94
Batch fecundity 473
Bering Sea 509
Berryteuthis anonychus – *see* squid, minimal armhook
Biomass
  distribution 63
  estimation (sardine) 617
  spawning stock 63
Bones 498
Bottom trawl 168, 757, 740
Brazil 156, 393, 581
Brevoortia
  gunteri – *see* menhaden, finescale
  patronus – *see* menhaden, gulf
Browns Bank 289
Bycatch
  in longline fishery 393
  in lobster fishery 430
  in sea scallop fishery 671
  in squid fishery 757
  in tuna purse-seine fishery 233
  of dolphins 233
  of octopus 430
  of sea turtles 393, 671

California 25, 306, 389, 453
Callinectes sapidus – *see* crab, blue
Cancer
  irroratus – *see* crab, Atlantic rock
  magister – *see* crab, Dungeness
Capture
  incidental (sea turtles) 393
  probability 740
  -recapture 563
Carcharhinus signatus – *see* shark, night
Caretta caretta – *see* sea turtles, loggerhead
Catch rate 430
Catchability 740
Cephalorhynchus hectori – *see* dolphin, Hector's
Cetaceans 661
Chesapeake Bay 63
Chile 207
Climate change 400
Clupeidae 723
Cod
  Atlantic 289
  Pacific 400
Conch, queen 278
Controlled access areas 563
Corbicula japonica 14
CPUE 489
Crab
  Atlantic rock 693
  blue 693
  Dungeness 489
  lady 693
  red king 740
Crassostrea virginica – *see* oyster, American
Crustacea 118, 489
Cynoscion nebulosus – *see* seatrout, spotted

Daytime spawning 389
Demographic structure 593
Density (population) 179
Dermochelys coriacea – *see* sea turtle, leatherback
Descriptions (taxonomic)
  Brevoortia
    gunteri 723
    patronus 723
  Psednos 245
  Sebastes
    ciliatus 328
    variabilis 328
    wilsoni 452
Diet
  cod, Pacific 400
  prey volume 366
  prowfish 168
  sea lion
    California 47
    Steller 498, 509, 522
  seal, harbor 108
  snapper, red 366
  squid 733
Digestion correction factor 498
Dissolved oxygen 63
Distribution
  amberjack, greater 533
  crab 693
  hatchdate (seatrout) 142
  prowfish 168
  salmon, juvenile 25
  whale 563
Diurnal cycle 389
Dive transects 489
Dissolved oxygen (DO) 63
Dolphin
  Hector's 441
  Spotted, pantropical 233
Dorsal-fin spine 251

Egg
  deposition 306
  identification (seabream) 555
  -size variation 207
Elasmobranch 156, 221, 757, 750
Emigration rate 464
Engraulis ringens – *see* anchoveta
Escapement 740
Estuaries 376, 533, 648
Eumetopias jubatus – *see* sea lion, Steller
Everglades 142

Falkland Islands 757
Farfantepenaeus aztecus – *see* shrimp, brown
Fecundity 473, 648
  batch 648
  relative 473
  rockfish, black 418
  seabream 648
  squid, market 306

Finite difference calculus 14
Fish size (red snapper) 366
Fisheries
  interaction 509
  management 581
  size-selective 1
  tuna 233
Fishery dynamics (squid) 661
Fishery reserve 533
Florida
  Bay 142
  eastern coast 533
  Keys 278
Flounder, summer 78
Footrope 740
Formalin 555
Foraging (harbor seal) 108
Franciscana 581

Gadus
  macrocephalus – *see* cod, Pacific
  morhua – *see* cod, Atlantic
Galveston Bay 264
Generalized linear model 563
Generalized additive model 563
Genetic
  differentiation (among cod) 289
  identification 108, 213
Georges Bank 289
GIS 264
Glacier Bay 489
GLOBEC 25
Goldlined seabream 648
Gonadosomatic index 94
Great Barrier Reef 94
Growth
  amberjack, greater 545
  curve 156
  prowfish 168
  rockfish 452, 711
  seatrout, spotted 142
  sex-specific 94
  shark, night 156
  shrimp, white 376
  snapper, red 593
Gulf of Alaska 168, 400, 509
Gulf of California 47
Gulf of Mexico 593

Habitat
  conservation 298
  use of 264
Hand harvesting 298
Harvesting techniques 298
Hatching date
  seatrout, spotted 545
  snapper, red 366
  histology 407
Hudson-Raritan Estuary 693
Humerus 682
Hypergeometric likelihood 464

Identification (fish eggs) 555
Incidental kill 233
Indeterminate 648
Indian River Lagoon 533
Intertidal 634
Istiophorus platypterus – *see* sailfish

Japan 14, 196
Jasus edwardsii – *see* lobster, southern rock
Juvenile studies 25, 142, 264
  menhaden 723
  mortality 233
  pollock 604
  rockfish 453
  shrimp 264, 376
  snapper 366

Kuroshio-Oyashio 179

Lake 14
Larval
  description 723
  development 118, 723
  rockfish 453
Lead^{210} 711
Length
  at age, chub mackerel 179
  frequency, shark 156
Life history
  model 1
  seatrout, spotted 142
Line-transect survey 441, 563
Liparidae 245
Litopenaeus setiferus – *see* shrimp, white
Lobster, southern rock 430
Loligo opalescens – *see* squid, market
Longevity (rockfish) 711
Longline fishery 179, 393
Lutjanus
  campechanus – *see* snapper, red
  carponotatus – *see* bass, stripey

Mackerel
  Atka 498, 509
  chub 179, 196
Mammals 47,108, 213, 581, 563
Marginal increment analysis 156
Mark-recapture 78, 376
Marlin, white 750
Marine sanctuaries 464
Maturity
  bass, stripey 94
  rockfish, black 418
Maximum likelihood method 14
Mediterranean 407
Megaptera novaeangliae – *see* whale, humpback
Menhaden
  finescale 723
  gulf 723
Mexico 47, 593
Microwire tags 376
Mid-water trawl survey 63
Migration
  diel 221
  from marine reserves 533
  shark 221
  vertical 221
Models
  growth 14
  habitat use 264
  life history 1
  optimal release 78
  recruitment 349
Mortality 349
  amberjack, greater 545
  dolphin, pantropical spotted 233
  lobster 430
  longline fishery 179
  seatrout, spotted 142
  squid, market 306
Movement
  shrimp 376
  sportfish 533
MtDNA
  rockfish 453
  salmonids 213
Multidimensional scaling 36

Nantucket Shoals 289
National marine sanctuary 563
New South Wales 634
New species 245
New Zealand 441
North Carolina (flounder) 78
Northern California Current 25
Nursery habitat 366, 376

Octopus, maori 430
Octopus maorum – *see* octopus, maori
Oncorhynchus
  kisutch – *see* salmon, coho 108
Opah 750
Orbital retia mirabilia 221
Orcinus orca – *see* whale, killer
Oregon 108, 418
Otoliths
  amberjack, greater 545
  elemental signature in 604
  in fecal samples 47, 108, 498, 522
  rockfish 453
Ovalipes ocellatus – *see* crab, lady
Ovarian cycle 418
Oxytetracycline 127
Oyster, American 298

Pacific Ocean 168, 233, 328, 733, 604, 733
Pagrus major – *see* sea bream, red
Pandalopsis dispar – *see* shrimp, sidestriped
Paralichthys dentatus – *see* flounder, summer
Paralithodes camtschaticus – *see* crab, red king
Parturition (rockfish) 418
Pavlof Bay 400
Penaeidae 376
Phoca vitulina richardsi – *see* seal, harbor
Photo-identification (marine mammals) 563
Pinnipeds 498, 509, 522
Phocoenoides dalli – *see* porpoise, Dall's
Placopecten magellanicus – *see* sea scallop
Pleurogrammus monopterygius – *see* mackerel, Atka
Poikilotherm 682
Pollock, walleye 498, 509, 522, 604
Pontoporia blainvillei – *see* franciscana
Pop-up satellite archival tags 221, 750
Population
  dynamics 661
  structure 604
Porgy, red 1
Porpoise, Dall's 563
Postovulatory follicle 473
Prey-size selectivity 509, 522
Protogynous 1
Prowfish 168
Psednos rossi – *see* snailfish
Purse-seine fishery 233

Radiometric age 711
Radium[226] 711
Rays 757
Recolonization (fish in rockpools) 634
Recovery 278
Recruitment
  anchovy, bay 63
  processes of 349
Reef habitat 298
Remote sensing 661
Remotely operated vehicle 389
Reproduction
  bass, stripey 94
  behavior 389
  franciscana 581
  prowfish 168
  rockfish, black 418
  seatrout, spotted 473
  squid 389
  tuna, bluefin 407
Residence time 376
Restoration
  conch 278,
  oyster 298
Rhabdosargus sarba—*see* seabream, goldlined
Rio Grande do Sul 581
Rockfish
  black 418
  blackgill 711
  dusky 328
  pygmy 452
  rockpools 634
ROV (remotely operated vehicle) 389

Sablefish 127
Sailfish 251
Salmon
  coho 25
  decline in *Onchorynchus* spp. 108
  juvenile 25
  predation on 108
  prey of 213
Salmonids 25, 213
  juvenile 25
Sampling bias 488
Sardine, Pacific 581, 617
Sardinops sagax – *see* sardine, Pacific
Sargassum 545
Satellite
  archival tags 750
  remote sensing 661
Scale-free networks 349
Scat 47, 108, 213, 498, 522
Scomber japonicus – *see* mackerel, chub
Scorpaenidae 711
SCUBA 366
Sea bream
  goldined 648
  red 555
Sea lion
  California 47
  Steller 498, 509, 522
Sea scallop 671
Sea surface temperature 179
Seal, harbor 108, 213
Seatrout, spotted 142, 473
Sebastes
  ciliatus – *see* rockfish, dusky
  melanops – *see* rockfish, black
  melanostomus – *see* rockfish, blackgill
  variabilis – *see* rockfish, dusky
  wilsoni – *see* rockfish, pygmy
Sea turtle
  Kemp's ridley 682
  leatherback 393
  loggerhead 393, 682
Seriola dumerili – *see* amberjack, greater
Sex
  change 1
  ratio 693
Sexual maturity 418
Sharks
  thresher, bigeye 221
  night 156
  predation 750
Shrimp
  brown 264
  sidestriped 118
  white 376
Size-selective fisheries 1
Skeletochronology (sea turtles) 682
Snailfish 245
Snapper
  red 366, 593
  Spanish flag 93
Soak time (gear) 179
South Carolina 473
Sparidae 555, 648
Spawning
  anchovy, bay 63
  bass, stripey 94
  diel 389
  frequency 473
  seabream 648
  season 418, 648
  squid 306
  stock biomass 63
  tuna, bluefin 407
Species
  protogynous 1
Squid 73
  fishery 757
  market 306, 389, 661
  minimal armhook 733
Stenella attenuata attenuata – *see* dolphin, spotted, pantropical
Stock enhancement 78
Strombus gigas – *see* conch, queen
Surveys
  dolphin 441, 489
  with fish traps 127
Survival rates 179, 757

Tagging 464, 750, 604
  marine reserves 464, 533
  natural 604
  shark 221, 750
Taiwan 251
Temperate estuaries 693
Temperature
  Effect on fish size (mackerel) 196

Testicular development 407
Tetrapturus albidus – *see* marlin, white
Theragra chalcogramma – *see* pollock, walleye
Thunnus thynnus – *see* tuna, bluefin
Translocation (for rehabilitation) 278
Traps 430
Trawl efficiency 740
Trophic niche breadth 693
Tuna, bluefin 407
Turtle – *see* sea turtle

Umpqua River 108, 213
Underwater video 740

Vertebral sections 156

Washington 563
Western North Atlantic 245
Whale
humpback 563
killer 563

Young-of-the-year (amberjack) 545

Zalophus californianus – *see* sea lion, California
Zaprora silenus – *see* prowfish